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| 10/825,500 | 04/15/2004 | Chao Chen | 555255012556 | 8568 |
| 7590 Lorri W. Cooper, Esq. Jones Day 901 Lakeside Avenue/North Point Cleveland, OH 44114 | | | EXAMINER NGUYEN, KEVIN M | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/825,500 | Applicant(s) CHEN ET AL. | |
| | Examiner Nguyen M. Kevin | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/22/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 6-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Claims 1-2 and 4-26 are pending in this application. Claim 3 is cancelled. Claim 5 is objected. Claims 1, 5 and 21 are amended. In view of the applicant's amendment, see pages 7-9, filed on 10/22/2007, with respect to the amended claims 1-2 and 4-26 have been fully considered and are not persuasive. The amendment necessitated a new ground(s) of rejection presented in this Final office action.
2. In view of the applicant's amendment, filed on 10/22/2007, the independent claim 5 is allowed.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claims 1, 2, 4, 16, 17, 19, 20, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen (US 6,542,091) in view of Ukita et al (US 6,933,926, Ukita).
3. As to claim 1, figure 2 of Rasanen teaches a keyboard comprising:

a plurality of keys associated with alphanumeric characters including the letters A-Z and at least the numbers 1-9 arranged in a known key arrangement (*figure 2 of Rasanen shows the letters A-Z and the numbers 1-9*), said keys being split into a left side section (*1,2,3,4,5*) and a right side section (*6,7,8,9,0*), with the left side section corresponding to the left side of the known key arrangement that is typically operated with the left hand of a user and the right side section corresponding to the right side of the known key arrangement that is typically operated with the

right hand of a user (the table 1 at column 8 of Rasanen shows data input keys 1-5 are assigned the left fingers of the left hand, and data input keys 6-0 are assigned the right fingers of the right hand of the operator);

wherein the left side section (1,2,3,4,5) is oriented at least partially above the right side section (4) to define an upper section (4) corresponding to the left side section and a lower section (5) corresponding to the right side section (5),

or the right side section (6,7,8,9,0) is oriented at least partially above the left side section (7) to define an upper section (7) corresponding to the right side section (0) and a lower section (6) corresponding to the left side section (6).

Rasanen fails to teach the left side and right side section at least partially vertically overlap one another. Figure 3 of Ukita teaches a keyboard comprising group L including the left hand keys (6L1, 6L2, 6L3), and group R including right hand keys (6R1, 6R2, 6R3), which partially vertically overlap one another.

Ukita's benefit is smoothly operated by users who are not familiar with the same type of device (col. 1, lines 45-48 of Ukita). Thus, it would have been obvious to a person of ordinary skill in the art to apply Ukita to Rasanen to achieve the predictable result. Using the known technique of Ukita would have been obvious to one of ordinary skill.

As to claim 2, figure 2 of Rasanen teaches the keyboard of claim 1, wherein all of the keys of the upper section (1,2,3,4) are positioned above all of the keys of the lower section (5,6).

As to claim 3, figure 2 of Rasanen teaches the keyboard of claim 1, wherein part of the upper section (4) vertically overlaps part of the lower section (5).

As to claim 16, the keyboard of claim 1, wherein at least some of the plurality of keys are further associated with at least one of symbols or functions, whereas Rasanen discusses in col. 7, lines 50-58.

As to claim 17, the keyboard of claim 1, further comprising a thumb wheel coupled to the keyboard, whereas Rasanen discloses a thumb disk 50, col. 23, lines 28-33.

As to claim 19, Rasanen teaches the keyboard of claim 1, further comprising at least one key associated with the caps function (in key 6, fig. 2).

As to claim 20, the keyboard of claim 19, wherein the at least one key associated with the caps function comprises a first caps key and a second caps key, with the first caps key being associated with the upper section and the second caps key being associated with the lower section, whereas figure 2 of Rasanen shows a first caps key in key 9, and a second caps key in key 6.

As to claim 22, figure 3 of Rasanen teaches a mobile communication device comprising: a housing having a face; and the keyboard of claim 1 associated with the face of the housing.

As to claim 25, table 1 of Rasanen teaches a method for inputting alphanumeric characters into a mobile communication device, comprising: holding a mobile communication device according to claim 22 with two hands such that the thumbs of the hands align with keys on the keyboard; utilizing a thumb of one hand to enter key strokes on the left side section of the keyboard; and utilizing a thumb of the other hand to enter key strokes on the right side section of the keyboard, wherein one of the thumbs is positioned above the other thumb on the face of the housing.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen in view of Ukita, and further in view of Lindeman (US 2003/0078069).

As to claim 6, Rasanen and Ukita teach all of the claimed limitation of claim 1, except wherein the upper section comprises at least three rows and five columns of keys, and the lower section comprises at least three rows and five columns of keys.

Figure 4 of Lindeman teaches the upper section (104) comprises at least three rows and five columns of keys, and the lower section (102) comprises at least three rows and five columns of keys.

As to claim 7, figure 6 of Lindeman teaches the keyboard of claim 6, wherein the five columns of the upper section align longitudinally with the five columns of the lower section.

As to claim 8, figure 3 of Lindeman teaches the keyboard of claim 6, wherein the five columns of the upper section are offset longitudinally from the five columns of the lower section.

As to claim 18, the keyboard of claim 1, further comprising a key associated with a "send" function, a key associated with an "end" function, and at least one key associated with a "shift" function, whereas the combination of Rasanen and Lindeman discusses in col. 8, lines 36-67 and paragraph 36, respectively.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Rasanen and Ukita to have the upper section (104) comprises at least three rows and five columns of keys, and the lower section (102) comprises at least three rows and five columns of keys as taught by Lindeman, because this would be accessible in an open position to perform one function and can be folded into a closed position in order to reduce the size and perform a separate, second function (paragraph 5 of Lindeman).

6. Claims 9, 15, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen in view of Ukita in view of Lindeman, and further in view of Lee et al (US 2002/0190957 hereinafter Lee).

As to claim 9, the combination of Rasanen, Ukita, and Lindeman teaches all of the claimed limitation of claim 1, except wherein the left side section of keys comprises a first row associated with characters "Q", "W", "E", "R", and "T", a second row associated with characters "A", "S", "D", "F", and "G", and a third row associated with characters "Z", "X", "C", and "V"; and the right side section comprises a first row associated with characters "Y", "U", "I", "O", and "P", a second row associated with characters "H", "J", "K", and "L", and a third row associated with characters "B", "N", and "M".

Figure 1a of Lee teaches the left side section (e.g. left orientation keys) of keys comprises a first row associated with characters "Q", "W", "E", "R", and "T", a second row associated with characters "A", "S", "D", "F", and "G", and a third row associated with characters "Z", "X", "C", and "V"; and the right side section (e.g. right orientation keys) comprises a first row associated with characters "Y", "U", "I", "O", and "P", a second row associated with characters "H", "J", "K", and "L", and a third row associated with characters "B", "N", and "M".

As to claim 15, figure 1a of Lee discloses the keyboard of claim 9, wherein the number "0" is associated with a key in one of the left side section or the right side section.

As to claim 23, figure 3 of Rasanen teaches a mobile communication device comprising: a housing (40) having a face; and the keyboard of claim 9 associated with the face of the housing.

As to claim 26, table 1 of Rasanen teaches a method for inputting alphanumeric characters into a mobile communication device, comprising: holding a mobile communication device according to claim 23 with two hands such that the thumbs of the hands align with keys on the keyboard; utilizing a thumb of one hand to enter key strokes on the left side section of the keyboard; and utilizing a thumb of the other hand to enter key strokes on the right side section of the keyboard, wherein one of the thumbs is positioned above the other thumb on the face of the housing, as discussed in col. 4 and col. 5.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Rasanen, Ukita, and Lindeman to have the left side section (e.g. left orientation keys) of keys comprises a first row associated with characters "Q", "W", "E", "R", and "T", a second row associated with characters "A", "S", "D", "F", and "G", and a third row associated with characters "Z", "X", "C", and "V"; and the right side section (e.g. right orientation keys) comprises a first row associated with characters "Y", "U", "I", "O", and "P", a second row associated with characters "H", "J", "K", and "L", and a third row associated with characters "B", "N", and "M" as disclosed by Lee, because this would employ in different kinds of portable information system such as a cellular phone, easily input desired texts through the keyboard apparatus even while holding the combined portable information system

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with his/her own hand, be conveniently inputted without need to alternate the configuration of the keyboard displayed onto the touch screen device whenever the user intends to input them (paragraphs 41 through 43 of Lee).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen in view of Ukita in view of Lindeman in view of Lee, and further in view of Ho et al (US 6,628,961, hereinafter Ho).

The combination of Rasanen, Ukita, Lindeman and Lee teaches all of the limitation of claim 1, except wherein the left side section of keys is associated with numbers 1-9, with the "1", "2", and "3" being associated with the first row, the "4", "5", and "6" being associated with the second row, and the "7", "8", and "9" being associated with the third row.

Figure 3 of Ho teaches the left side section of keys is associated with numbers 1-9, with the "1", "2", and "3" being associated with the first row, the "4", "5", and "6" being associated with the second row, and the "7", "8", and "9" being associated with the third row.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Rasanen, Ukita, Lindeman and Lee to have Figure 3 showing the left side section of keys is associated with numbers 1-9, with the "1", "2", and "3" being associated with the first row, the "4", "5", and "6" being associated with the second row, and the "7", "8", and "9" being associated with the third row as disclosed by Ho, this would never be limited by the complicated input method of the handset (col. 6, lines 38-41 of Ho).

8. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen in view of Ukita in view of Lindeman in view of Lee in view of Ho, and further in view of Capps (US 2003/0073414).

As to claim 11, the combination of Rasanen, Ukita, Lindeman, Lee and Ho teaches all of the limitation of claim 1, except for a key associated with the space function and a key associated with the number "0". As modified by Capps, Capps conventionally discloses a key in which a space is a "0" (paragraph 16).

Claim 12, Capps conventionally discloses space and "0" are designated the common key.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Rasanen, Ukita, Lindeman, Lee and Ho to have a key in which a space is a "0" as conventionally disclosed by Capps, because this would be the conventional keyboard of the mobile phone.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen in view of Ukita in view of Lindeman in view of Lee, and further in view of Grant (US 5,119,078).

The combination of Rasanen, Ukita, Lindeman, and Lee teaches all of the limitation of claim 1, except for wherein the right side section of keys is associated with numbers 1-9, with the "1", "2", and "3" being associated with the first row, the "4", "5", and "6" being associated with the second row, and the "7", "8", and "9" being associated with the third row.

Figure 7 of Grant discloses the right side section of keys is associated with numbers 1-9, with the "1", "2", and "3" being associated with the first row, the "4", "5", and "6" being associated with the second row, and the "7", "8", and "9" being associated with the third row.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Rasanen, Ukita, Lindeman, and Lee to have figure 7 showing the right side section of keys is associated with numbers 1-9, with the "1", "2", and "3" being associated with the first row, the "4", "5", and "6" being associated with the second

row, and the "7", "8", and "9" being associated with the third row as disclosed by Grant, because this would be the conventional V-shaped keyboard.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rasanen in view of Ukita in view of Lindeman in view of Lee in view of Grant, and further in view of Capps.

The combination of Rasanen, Ukita, Lindeman, Lee and Grant discloses all of the limitation of claim 1, except for a key associated with the space function and a key associated with the number "0". As modified by Capps, Capps conventionally discloses a key in which a space is a "0" (paragraph 16).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Rasanen, Ukita, Lindeman, Lee and Grant to have a key in which a space is a "0" as conventionally disclosed by Capps, because this would be the conventional keyboard of the mobile phone.

11. Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa (US 5,626,428) in view of Ukita et al (US 6,933,926, hereinafter Ukita).

As to claim 21, Figure 9 of Miwa teaches a mobile communication device comprising: a housing (40) having a face; and a keyboard associated with the face of the housing, wherein the keyboard includes a plurality of keys associated with both alphabetic and numeric characters arranged in a standard alphabetic format selected from a group consisting of QWERTY (abstract).

Miwa fails to teach the keyboard is split into a left side section corresponding to keys typically operated by a left hand of a user and a right side section corresponding to keys typically operated by a right hand of user, with at least some of keys of one of the left or right side

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sections being disposed to at least partially vertically overlap at some of keys the other section on the face of the housing.

Figure 3 of Ukita teaches a keyboard comprising group L including the left hand keys (6L1, 6L2, 6L3) and group R including right hand keys (6R1, 6R2, 6R3), which partially vertically overlap one another.

Ukita's benefit is smoothly operated by users who are not familiar with the same type of device (col. 1, lines 45-48 of Ukita). Thus, it would have been obvious to a person of ordinary skill in the art to apply Ukita to Miwa to achieve the predictable result. Using the known technique of Ukita would have been obvious to one of ordinary skill.

As to claim 24, Miwa teaches all of the limitation of claim 21, except for two hands such that the thumbs of the hands align with keys on the keyboard; utilizing a thumb of one hand to enter key strokes on the left side section of the keyboard; and utilizing a thumb of the other hand to enter key strokes on the right side section of the keyboard, wherein one of the thumbs is positioned above the other thumb on the face of the housing. As modified by Ukita, Ukita discusses in column 4 and column 5. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Miwa to have the teaching in column 4 and column 5 as discussed by Ukita, because this would be smoothly operated by users who are not familiar with the same type of device (col. 1, lines 44-48 of Ukita).

Reasons for Allowance

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Claim 5 is allowed over prior art.

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3. The following is an examiner's statement of reasons for allowance: with respect to the independent claim 5, the prior art of record does not fairly teach the claimed "wherein the alphanumeric characters represent a QWERTY-style key arrangement, the upper section includes keys associated with the alphabetic characters "QWERTASDFGZXCV", and the lower section includes keys associated with the alphabetic characters "YUIOPHJKLBNM" along with the other claimed limitations.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen M. Kevin whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 9:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M. Nguyen/

Kevin M. Nguyen

Examiner

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